

LWC PAPER PRODUCT AND METHOD OF MAKING THE SAME

BACKGROUND OF THE INVENTION

Field of the Invention

Embodiments of the present invention relate to an LWC paper product and a method of producing the same.

5 Description of Related Art

In the field of producing paper products, one ongoing goal is to improve the quality of a paper product, especially LWC paper, and the economy of producing the same.

10 Paper is required to have a certain surface quality for ensuring a desired gloss and print quality, a low transparency and a sufficient stiffness and tear resistance. Additionally, since paper is produced in large quantities in a paper mill, the efficient use of raw material is important. However, these demands are somewhat contradictory to each other. Paper can be provided with a sufficient gloss by calendering the paper by compressing it in a nip, often moistened and heated in a certain manner. The surface
15 fibers and coating of paper are preferably pressed smooth by this compression, yet without compacting the middle layer of paper. The compaction of a middle layer undermines the stiffness of paper and reduces tear resistance. At the same time, the transparency of paper increases. This compaction of a middle layer is often referred to as a loss of bulk. In this case, bulk is understood as being the inverse value of density and a
20 loss thereof is thus equal to a densifying compaction of paper or board.

Since the process of making paper is highly raw material intensive, even a minor saving in raw material provides a major advantage over competitors. In this respect, a saving of just one percent can be considered a major competitive edge and the investment